

FEBRUARY
1951

BUFFALO — SOGES CONVENTION CITY
APRIL 18 TO 21, 1951—HOTEL STATLER

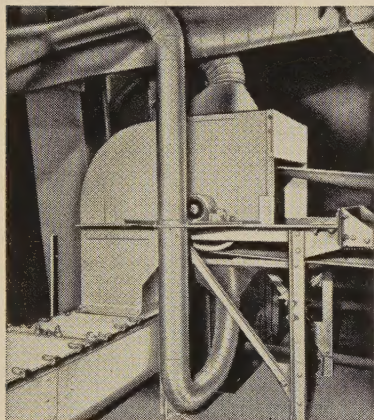
On the right is Standard Elevator, owned by Standard Milling Company (5 million bus.) John Mack is Superintendent. At left is Lake & Rail Elevator of International Milling Company (4½ million bus.) — Edward P. Lynch, Superintendent.

Grain

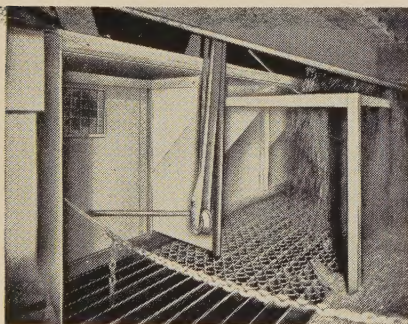
THE MAGAZINE OF PLANT MANAGEMENT AND OPERATION

KIRK^{AND}BLUM DUST CONTROL SYSTEM

STOPS DUST



View at belt discharging point. Note hoods and exhaust connections both above and below belt for complete dust control.



Corn being unloaded at car dump station. Exhaust connections as shown at upper left are located at short intervals along station.

...in the modern Cooperative Mills, Reading, Ohio

This typical Dust Control System is one of many Kirk & Blum installations for grain elevators and mills. Basic requirements were agreed upon by owner, insurance company, equipment suppliers and Kirk & Blum engineers. The system was then designed, fabricated and installed by Kirk & Blum.

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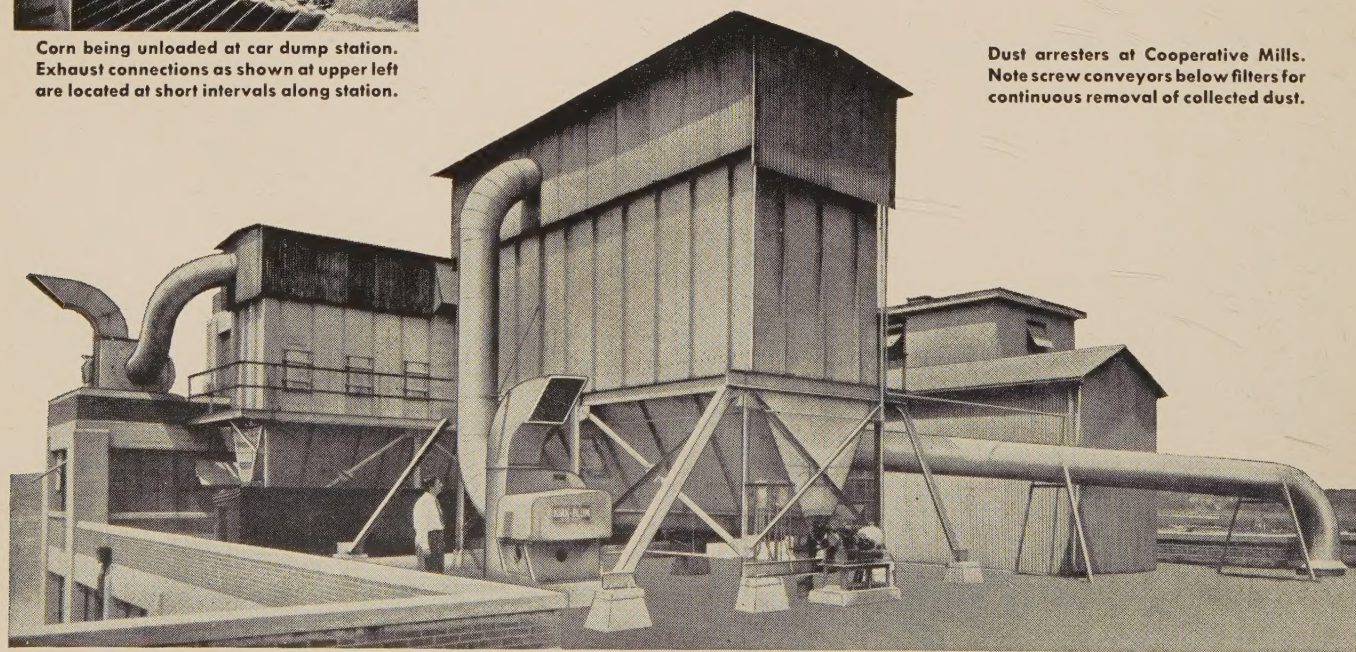
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CINCINNATI 25, OHIO

KIRK^{AND}BLUM

DUST CONTROL SYSTEMS

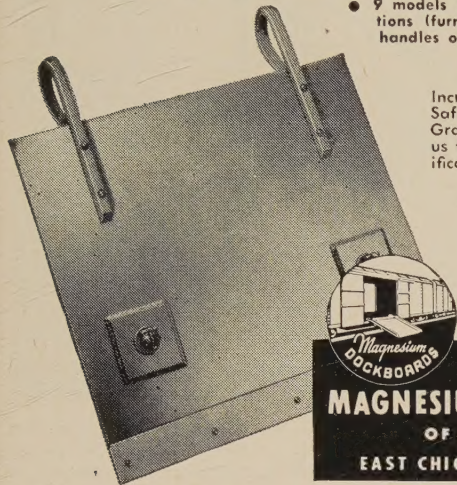


Dust arresters at Cooperative Mills. Note screw conveyors below filters for continuous removal of collected dust.

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with

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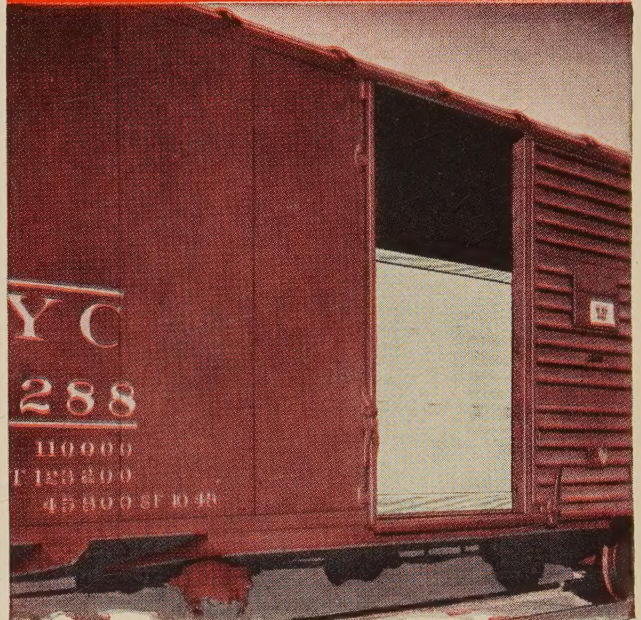
ESTABLISHED 1872

ENTERPRISE, KANSAS, U.S.A.

FEBRUARY, 1951

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NOT FICTION

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Grain

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1951

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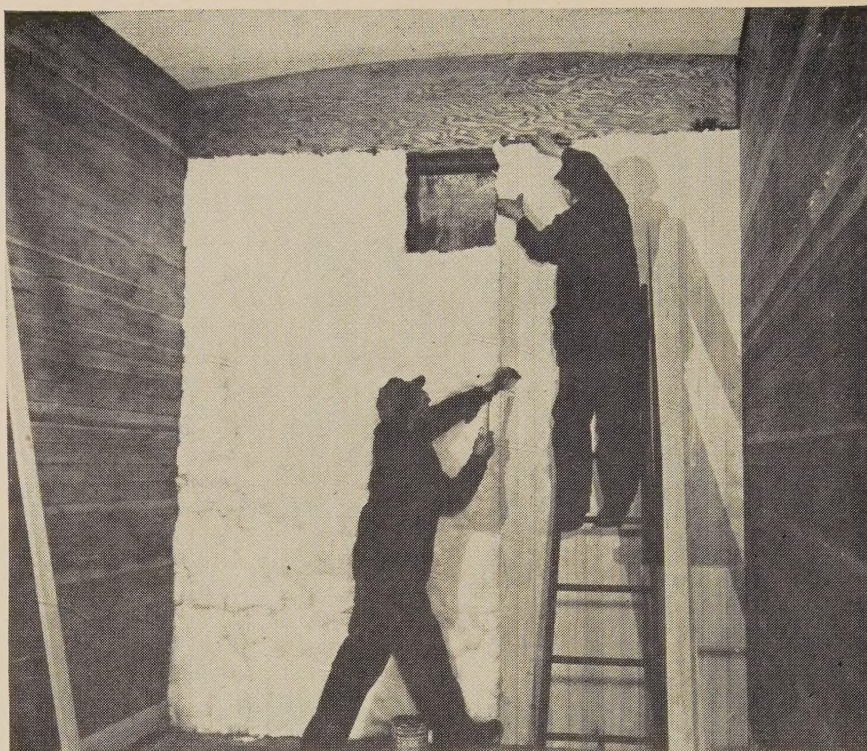
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After the Fiberglas wool blankets are applied to the end of a railway car in this new system of control of insects, a wood liner is installed over the blankets and nailed into position in the conventional manner. The liner compresses the Fiberglas wool which fills space in which insects otherwise would be harbored.

Controlling Insects In Box Cars by New Method

STUDIES have revealed that the primary source of infestation in box cars is from insects that harbor in accumulations of grains and other organic food materials which accumulate in inaccessible places behind inner wooden wall linings. At present, many box cars are constructed with the absence of bottom side liner boards, thus forming a grain channel at floor level along all sides.

This permits settling of grains and other organic materials by gravity but only provides partial solution of the problem. Even with grain channels, it is possible for accumulations of grain particles and dust to become caked in the side walls to such an extent that they cannot be broken out by hammering the inner lining.

From three to six compartments are formed by the horizontal corrugations in the steel ends, the fir nailing strips bolted into regularly spaced corrugations and the inner wooden end linings composed of tongue and groove boards nailed to the fir strips in a vertical manner. Grains and organic dust getting into these compartments through cracks or small breaks cannot be removed by any method of cleaning.

Experience has shown there is no fractural means of eliminating insect populations which invariably become located in such accumulations. Insect pests find their way into such inaccessible places and use the accumulations as food and harborage in which to multiply unmolested.

A new method has been announced by Frank S. Bishop of Minneapolis. It was developed in collaboration with a large milling company and one of the leading railroad and it alleviates this condition in the end and side walls by filling the voids between the end linings and other spaces with Fiberglas blankets. The resilient, fluffy Fiberglas wool prevents accumulations of organic material in these areas. In addition, any insects that penetrate the Fiberglas wool cannot live for any length of time, since the material provides no food for their sustenance.

The system can also be used between the side walls of cars to accomplish the same structural condition — to prevent the accumulations of insect food materials by filling the voids with an insect resistant material.

Installation of the Bishop system in

the two ends of the freight car requires approximately one man hour on the part of two carpenters and about 180 sq. ft. of Fiberglas wool. The material and labor required to install the Bishop system between the side walls of a car will depend upon the size of the car.

In the end wall construction, the interior surface of the corrugated steel ends and nailing strips is first painted with an asphalt emulsion which is designed to protect these areas from moisture. Blankets of Fiberglas wool 2 inches thick and 24 inches wide with the length corresponding to the width of the car, are then nailed to the nailing strips, to be held in place while the wood lining is installed in the conventional manner. This compresses the wool firmly into place and fills all voids in the spaces behind the linings. The method of application of the Bishop system to the side walls is similar to that used in the car ends.

Tests Show Value

Two conclusive tests which have been conducted, illustrate the inability of insects to propagate in or migrate through Fiberglas wool.

In one, a layer of infested flour was placed in the bottom of a beaker and separated from a top layer of clean, uncontaminated flour by a compressed two-inch thickness of Fiberglas wool. The insects did not penetrate the wool and the top layer of flour remained uncontaminated after the beaker stood for months under conditions ideal for propagation. In the other, a trial installation of the Bishop system was made in the ends of a car in 1947. The side walls were left untreated.

After approximately 3 years of service, during which time the car traveled to all sections of the country, the end and side walls were removed and the contents examined in the biology laboratory of a larger mill. The ends of the car, protected by the Bishop System, were found to be free of all types or forms of infestation. Bottom boards of the untreated sides were removed and large accumulations of grains and organic material were found. Analysis of this material showed it contained many live insects that had developed for several generations.

Investigation of the system has been made by representatives of the American Institute of Baking, Association of American Railroads, and Millers National Federation, who have accepted this approach as the first practical solution to this whole problem.

[Questions remaining to be answered satisfactorily are the cost of this method, assuming both side and end walls are covered; who will bear this cost, shippers or carriers; how long the glass wool installation will last. — Editor.]

Plant Maintenance Is a Paying Business

By C. C. CAGLE

THE WORD "maintenance" itself is hard to define, in that it can cover a multitude of operations, normally performed, regardless of the labor classification of the personnel doing the work. However, I would like to establish the definition of the word to mean "the maintenance of all plant equipment and physical properties in a maximum state of repair at a minimum cost." Furthermore, this includes only the phase of the maintenance work performed by personnel designated as such and employed for the explicit purpose of doing maintenance work.

The staggering fact that has put plant maintenance on the carpet today is that from one-third to one-half of your total plant operating cost today is maintenance in one form or another. The thing about this figure that makes plant management doubly concerned is that most can remember when this figure was considerably smaller, and in some cases, not even half this large.

Causes of High Maintenance Cost

Now let us analyze some of the causes of high maintenance cost. First, plant maintenance cost in many cases is not as high as it may seem. Per-

haps we are too prone to make comparison rather than dig out the facts. Perhaps the per unit cost of maintenance is out of proportion with the per unit cost of packing and loading, or the per unit cost of processing.

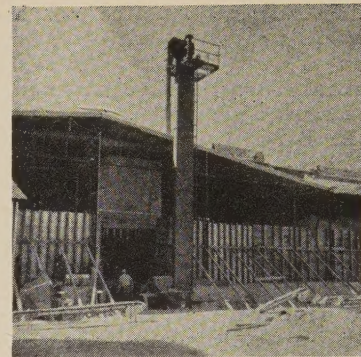
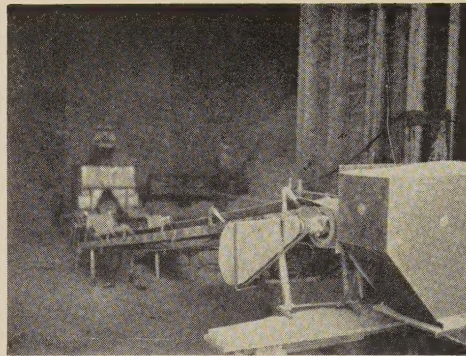
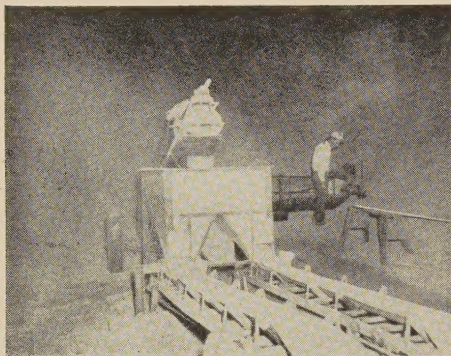
Of course, this does not hold true in every case; but since we are speaking in generalities I will venture to say that in most cases this difference in per unit cost is due to the use of better methods of packing, loading, and processing. It is true, these departments have also experienced considerable increase in their per unit cost in the last few years, due to the increasing demand for better house-keeping and sanitation, which in many cases required the addition of personnel.

By the same token your maintenance department has shouldered a large portion of this burden. More personnel was added to the maintenance department in many cases, and in those cases where no more personnel was added a great portion of the cost of making the plant more accessible and self cleaning has been charged off as maintenance expense.

Second is the large amount of maintenance work deferred during the war. This condition, of course, was



For grain processing plants of sufficient size, a machine shop is an essential part of maintenance work. Here is a corner of A. E. Staley Mfg. Co. machine shop at Decatur, Ill. Note the overhead monorail which carries material and equipment to all parts of building.



INTERESTING METHOD OF HANDLING BULK GRAIN

The equipment shown in these views was designed and assembled by Herman Kroloff, grain elevator superintendent of Allied Grain Co., Phoenix, Ariz. and an active SOGES member. The view on the left shows a fish-tail biting incessantly into a huge pile of bulk barley. It is elevated by a 12-inch conveyor (called a "bazooka" by the workmen) which dumps the bulk grain into a hopper containing two spouts for double capacity. These spouts pour the grain out onto portable conveyor belts and convey it into a larger hopper at the base of a 40-foot elevator leg. The elevator leg, shown at the right, elevates the grain into an overhead screw conveyor which moves the barley into the large concrete elevator for processing or storage, or else it can be moved into nearby box cars for shipment. This long overhead screw conveyor, close to the roof of the bulk storage building, is reversible and can be used for piling grain into the bulk warehouse or for unloading the grain as shown in these pictures. With this arrangement, two men can move 50 tons of bulk grain an hour quite easily.

brought about by scarcity of materials, almost continuous plant operation, which made it practically impossible to do anything but breakdown maintenance, and in many cases lack of skilled personnel.

In short, some of the plants operated so continuously during and immediately after the war without benefit of replacement materials and new equipment, that after operating time returned more to normal and materials were available, the plant practically had to be picked up off the floor and put back in operation. This condition certainly does not lend itself to a lower maintenance cost.

Third, the increase in materials cost brought about by the postwar merry-go-round.

Fourth, the increase in labor cost which is also reflected in increased payroll taxes and insurance.

Fifth, and last but not least, is the decrease in efficiency of maintenance personnel. Now let us blame this condition on the national trend, on the apparent desire of the American public or the individual citizen to get something for nothing brought about by the socialistic trend in government, the "new deal," the strange hold labor has on our national economy, or whatever hypothetical reason you can think of. But here again let us analyze the facts.

The industry as a whole has gone all out since the war to reduce processing and handling cost.

How many have employed highly trained maintenance engineers and given them the wholehearted support they need to put your maintenance department on a paying basis? How many still hold to the time honored theory that the maintenance department (the department that spends one-third to one-half of the total production cost) is strictly a service department vested with the meager responsibility of doing just what may be required of them by the other

plant departments? How many of you have taken the time and put forth the effort to familiarize yourself with the tried and proven maintenance methods and procedures and the mechanics of maintenance administration as you have the other phases of your plant operations? Lastly, how many of the plant maintenance shops are stuck in a corner of the B-drive floor or some other equally depressing location.

Personnel

The head of the maintenance organization must certainly be a man of the highest caliber. He not only must have above average or exceptional mechanical ability; but it would be greatly to his advantage to have had first hand experience in all phases of the maintenance operation. He must have at least a working knowledge of drafting, sheet metal work, millwrighting, electricity, steam-

fitting, plumbing, lubrication, welding machine shop practices and a multitude of other specialties such as, a fair understanding of the milling process and packing and loading methods.

He must be able to direct and instruct the people under him as well as conduct a progressive training program for all maintenance personnel. Above all else, he must have the formal training or the natural ability and deep appreciation for administrative work to enable him to establish controls and procedures to develop preventive maintenance schedules and maintenance records.

In short, the ideal maintenance superintendent is a mechanical engineer, electrical engineer, milling engineer, teacher, business administrator, and a jack of all trades mechanic, thrown into the pot and stirred up with a liberal dash of salesmanship thrown on top. This latter part he will certainly need to overcome some of the customs built up in the milling industry through the years, and to put his department on a paying basis.

The maintenance foreman, of course, should have most of the qualifications of the department head but more specialized.

Working Conditions

As foolish as it may sound, this is one item that is costing the industry many thousands of dollars each year. A clean, spacious, and orderly shop and storage area are a must for efficient mechanical operation. A good mechanic must have a good work bench; one that can be kept in a neat and orderly manner. If he does not have he is not a mechanic nor ever will be.

A mechanic's work bench should have adequate tool storage space. He will never buy good tools of sufficient quantity to do his work until he has a place to put them. Even if he had the tools and no place to put



Taken just before the Korean War, this scene shows one of the many primitive mills in South Korea grinding grain by ox-power with the aid and supervision of women. These mills were quite common in the country during peacetime. Now with artillery, tanks and planes overrunning the land, death and ruin have taken their place. It is doubtful if many of these mills are still in existence, let alone operating. Beautiful, idyllic scenes such as this are victims of the havoc of war. Barbarous destruction takes over. (U. S. Army Photo from Acme.)

them, he could not find them, so he may as well not have them. I am stressing this point because it is one of the most important factors in any mechanical organization.

Always remember, a mechanic's tools are his pride. Unless he develops that pride he is not a mechanic. By all means the company should make sure their own shop equipment is adequate and kept in good operating condition.

An adequate supply of large tools such as electric drills, impact wrenches, 36" adjustable wrenches, 48" & 60" pipe wrenches, tap and die sets, chain blocks and other tools so expensive that the cost would be prohibitive to the worker, should be furnished by the company.

Always remember, the proper tools are cheaper than labor. This again has a good effect on the worker and encourages him to buy his own hand tools. The psychological effect of good working conditions encouraging the workman to buy the proper tools is secondary as far as reduction in maintenance cost is concerned.

The primary saving comes from the man using those tools. If all the money that has been wasted in the milling industry in the past fifty years, due to the use of square headed machine bolts and the adjustable, or commonly called crescent wrench, were piled in one place it would look like the national debt.

The hexagon head bolt and a good socket set with a ratchet and speed wrench can save you hundreds of dollars yearly in assembly and disassembly time. Another tool on the market today that can save you more money than you ever dreamed of is the electric impact wrench. A good time and motion study man would amaze you when he showed you how much money a dull file can cost you.

Records

If I were to be given the responsibility of maintaining your plant with my only compensation being a percentage of the reductions of maintenance cost, I would establish a complete maintenance record system as the first step toward earning my living.

The returns would be very small the first year. The second year they would be little more. But the third, fourth and fifth years and thereafter would prove very lucrative indeed. Maintenance records are only as good as the historical information they give.

Every record should be prepared in a manner that the information could be used to make a graphic representation of maintenance activity. An adequate maintenance record system is the only means whereby a sound maintenance schedule and preventive maintenance program can be established.

Certainly, the smaller plant that

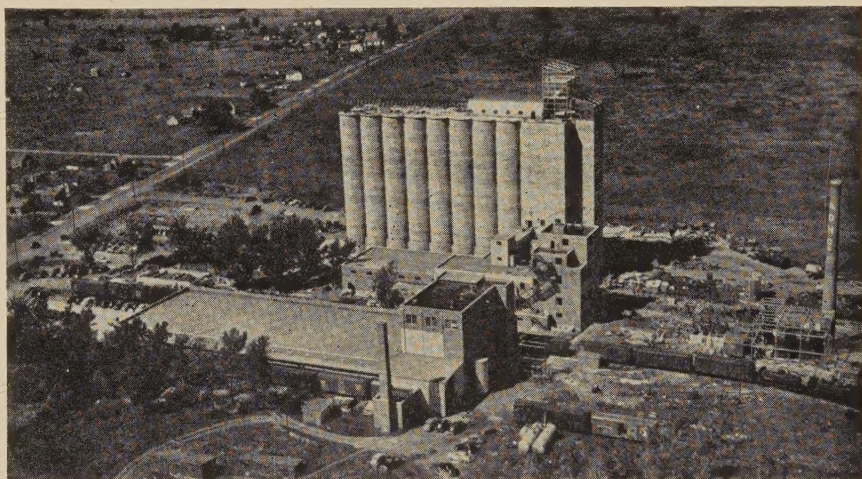
employs one or two maintenance men does not have the need for maintenance records that a plant employing 40 or 50 men has. In the small plant the maintenance man gets to know his plant like the palm of his hand. His head is his card file system, along with an occasional entry in a note book.

However, it is easy to see the folly of one, or even a half dozen men trying to keep historical information in their heads for the larger plants. Records must necessarily be prepared to fit the needs of the particular plant where they are to be used.

There are a few absolute musts, as far as records are concerned, that should be kept in every plant. They are as follows: A card file or some other method of record should be kept on every individual piece of

maintenance assets and liabilities, or, if properly prepared, may be used to this effect any time you desire. They ask you the important questions pertaining to your maintenance business and then answer them for you. In short, a complete maintenance record system five years old (and this is a very tender age) is 5% to 10% of your maintenance organization.

As an example, how much money could I save on leather belting by increasing belt speeds or belt size on certain critical drives? How long will a certain anti-friction bearing last and why doesn't it last longer? How much did it cost last year to maintain a certain machine? How much did machine cost? How old is it? And would it be cheaper to replace it? When is the last time this motor, this machine, this circuit



Recently put into operation was this new soybean processing plant of Archer-Daniels-Midland Co. at Mankato, Minn. It is said to be the largest soybean plant in the state and is the fifth of such plants to be erected by the company. The capacity is 3 million bus. annually, which is equivalent to 67,000 tons of 44% soybean oil meal. Storage for 1,100,000 bus. of soybeans is provided by 18 concrete tanks 150 ft. in height. A three-story preparation building houses heavy processing equipment, and a five-story extraction plant houses facilities for removal of the oil. Other structures include a boiler house, warehouse and office building.

equipment in the plant. This card should carry all the pertinent name plate data and other such information as date of installation, cost, shaft speeds, shaft sizes, keyway sizes, bearing numbers, etc. In the case of motors, there should be a space provided on the record information on starting equipment.

All equipment records, regardless of the type, should have adequate space for recording the maintenance work done on that particular piece of equipment. Equipment should be numbered for reference. These equipment records, along with other maintenance records, are the key to a comprehensive maintenance program.

They are the basic tool for planning and scheduling an effective preventive maintenance program. They are the graphic representations of the trend of the maintenance business. They are the annual report of

breaker, this main feeder line was given a preventive maintenance check? When should it be checked again? And how will it cost to do so?

An unavoidable breakdown has occurred, basis, past experience, how many man hours will be required to get the plant back in operation? What caused the breakdown and what steps should be taken to prevent future occurrences? These and thousands of other questions pertinent to efficient and economical plant operation can be answered with accuracy by a properly prepared and kept equipment record system. Any number of these systems are available.

Contact your stationery supply house and ask to see some of them. Let us run this business of maintenance in a business-like manner as you do other phases of your operations and make it pay.

Complete perpetual inventories should be set up on all storeroom

items, such as nuts and bolts, steel, sheet metal, bearings, sanitation supplies, equipment replacement parts and others too numerous to mention. A perpetual inventory properly prepared will give you an accurate consumption record, also consumption records will pay great dividend in that you can take advantage of quantity purchasing.

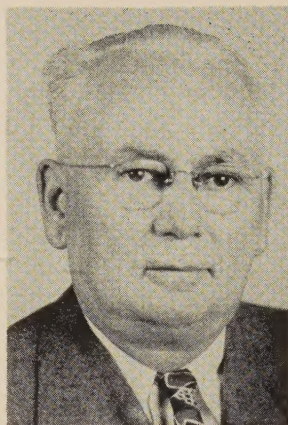
There is considerable saving to be realized in quantity purchasing, yet no one can intelligently approach this matter without adequate perpetual inventories and consumption records. A saving of 5% is usually a minimum figure to be realized by quantity purchases, yet 5% of a \$100,000 yearly materials cost would pay the cost of keeping the inventories five times over.

(Concluded in next issue)

HONOR ROLL

Note that we have a new leader this month, John Mack having just passed Lee McGlasson. The race continues to be close however. Here is the present standing of members who have secured new SOGES members since the last convention. If your name isn't on the list try to put it there by next month.

John Mack, Buffalo	9
Lee McGlasson, Seattle	7
James Auld, Minneapolis	4
R. K. Krebbs, Kansas City	4
John J. Kitching, Buffalo	3
E. A. Christie, Cedar Rapids	2
O. E. Christensen, Seattle	2
Paul Christensen, Minneapolis	2
Charles Delzell, Kansas City	2
Felix Schwandner, Champaign, Ill.	2
Ward Stanley, Kansas City	2
Ralph Yantzi, Kansas City	2
Fred Adams, Chicago	1
Vincent Blum, Omaha	1
Sid Cole, Chicago	1
Claude Darbe, Kansas City	1
J. W. Dickinson, Chicago	1
B. E. Friel, Kansas City	1
Wm. Gassler, Chicago	1
John Gullledge, Chicago	1
Charles Harbin, Chicago	1
Richard Harfst, Chicago	1
Lewis Inks, Akron, Ohio	1
Clifford MacIver, Minneapolis	1
Henry Onstad, Burlington, Wis.	1
Art Osgood, Minneapolis	1
Russell Paarlberg, Hammond, Ind.	1
E. J. Raether, Minneapolis	1
W. A. Tyler, Kankakee, Ill.	1
Wm. Weatherly, Galveston	1
Dale Wilson, Chicago	1
Charles Winters, New Orleans	1
Total	61



WARD STANLEY
Kansas City, Mo.

THE PRESIDENT'S CORNER

FEBRUARY, the shortest month of the year, compensates for its brevity by giving our country two of its greatest men, Washington and Lincoln. Washington was the far-sighted and courageous leader in laying the foundation on which Lincoln afterward erected a united nation. I know this last statement will grate on the ears of many who have been superficial students of history—but the real establishment of the Union was made in the crucible of civil strife under Lincoln.

Scarcely a school boy lives in America who has not heard of Washington's Farewell Address, but only a few know anything about it except his warning for our country to keep free from entangling alliances. How well that warning has been heeded everyone knows — and especially those in the homes where our 5,000 or 6,000 boys who have lost their lives in Korea came from.

Entanglement Unnecessary

It is written "Man cannot live by bread alone". Neither can man or nation live to himself or itself alone. It is a fact that quoted phrase means just that and that alone — but the fact that neither man nor nation can live to himself or itself alone does not mean that either needs to become entangled with the affairs of the other (especially their purely local affairs) to such an extent as to go to war to enforce on others their ideas and ideologies, when these are wholly foreign to that people and not desired by them.

A dictator is one who compels another to do as he says, without regard to the wishes and desires of that other. The thing about which he dictates has nothing to do with whether the acts are dictatorial or otherwise.

Surely Washington knew this nation would be obliged to carry on commerce and trade with other nations. He himself carried on an extensive trade with the West Indies. It was in regard to meddling with the internal affairs and the international affairs of others with which Washington was dealing when he warned against "entangling alliances".

If in any community of a number

of families there be two or three of them that get at "reraws" among themselves and any other family there wants the enmity of those at "reraws", just let them stick their nose into the row and they will get what they wanted.

Foundation Stones

Knowledge, wisdom, understanding, courage, honor, integrity of purpose, farsightedness and dependability are the real foundation stones on which this thing called diplomacy should rest. Absent any one of them and the foundation is weakened. Washington undoubtedly had these elements in mind and knew that a failure in any one of them would bring trouble. Test our present "foreign relations" by the eight fundamentals above, and then say the "Farewell Address" is outmoded!

Lincoln — a man whom most people will begin to talk about with references to his humble origin — was great. Preference is here given to the greatness of his work and the magnificence of his achievements. If his origin was humble, all the more credit is due, for he stands on such a pinnacle as makes the position of most of his successors look like mole-hills — and some of them like excavations.

In one of his most noted addresses he said that our nation had been conceived in liberty and dedicated to the proposition that all men are created free and equal. He then pointed out that at that moment there was a terrific struggle going on to test whether a nation so conceived and so dedicated could long endure. The outcome of that struggle proves that he erected a United States on the foundation laid by the founding fathers.

Lincoln As A Prophet

His efforts were not ideas of the moment nor were they accidental. On Jan. 29, 1837, when he was 28 years of age, he gave an address, and, after pointing out the liberties under our political institutions which were a gift to us, said:

"We, when mounting the stage of existence, found ourselves the legal

inheritors of these fundamental blessings. We toiled not in the acquirement or establishment of them; they are a legacy bequeathed us by a once hardy, brave, and patriotic, but now lamented and departed, race of ancestors.

"Theirs was the task (and nobly they performed it) to possess themselves, and through themselves us, of this goodly land, and to uprear upon its hills and its valleys a political edifice of liberty and equal right; 'tis ours only to transmit these—the former unprofaned by the foot of an invader, the latter undecayed by the lapse of time and untorn by usurpation — to the latest generation that fate shall permit the world to know.

"This task of gratitude to our fathers, justice to ourselves, duty to posterity, and love for our species in general, all imperatively require us faithfully to perform.

"How then shall we perform it? At what point shall we expect the approach of danger? By what means shall we fortify against it? Shall we expect some transatlantic military giant to step the ocean and crush us at a blow? Never! All the armies of Europe, Asia, and Africa, combined with all the treasure of the earth (our own excepted) in their military chest, with a Bonaparte for a commander, could not by force take a drink from the Ohio or make a track on the Blue Ridge in a trial of a thousand years.

"At what point then is the approach of danger to be expected? I answer, If it ever reach us it must spring up amongst us; it cannot come from abroad. If destruction be our lot we must ourselves be its author and finisher. As a nation of freemen we must live through all time, or die by suicide."

Remember the time when these utterances were made and then read this quotation again and then ask yourself was Lincoln a prophet? Did he see the trend of events in America? In a nation where 6% of land area, 7% of its population, 85% of its stocks, 50% of its hospital beds, 92% of its bath tubs, 48% of its radios, 52% of its high schools, 75% of its newspapers, magazines and periodicals, of the entire world are found, where more railroads and hard surface highways, more telephones and telegraph, where we produce 34% of the meats and 45% of the total wealth — with all of this power of material wealth, if we are rightly inspired and rightly led, what should we fear?

What egregious errors of our nation occurred since the Civil War to cause all this material wealth and power to accumulate? With a people all these years better fed, better clothed, better housed and better protected than the people of any other nation on earth, why do we hear that the methods and standards of these growing years were ruled by the "horse and buggy days"?

Ridicule Comes Into Being

There came into American life about a score of years ago the idea that when it was desired to overthrow some established principle or to establish some new one the weapon of attack was not reason, not common sense, but ridicule. Ridicule if it was a principle, or "smear" if it was a person to be overthrown. No idea of honor entered into it. In fact such a thing could not have been possible. Honor abides with truth and finds no resting place among immoral or unprincipled peoples.

There was a note of flippancy about these things — catch phrases were used because the shallow-minded

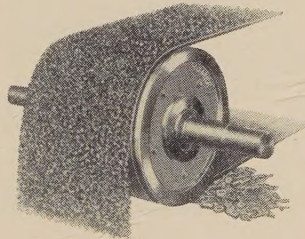
seize on such things. A creature called the common man was dolled up, dressed and properly painted and paraded before the world. Burning words were poured forth because of his plight. The persons who put the "common man" in this awful predicament were the "princes of privilege", the malefactors of great wealth. They had run things by the rule of the "horse and buggy days" but now there was a "new deal".

How the shallow thinker, the ne'er do well, the uplifter joined and echoed and re-echoed the catch phrases until they became bywords in the land!

In all these growing years famine

Don't Take Chances ***with TRAMP IRON!***

With HOMER Permanent non-electric Magnetic Separators you eliminate any possibility of loss of magnetic protection due to Power Failures; Burn Outs; Atmospheric and Temperature Restrictions; Wet or Dry Locations, because HOMER Magnetic Separators are not affected by these elements. HOMER Magnetic Separators are available in the following types: Pulleys, Plates, Drums, Ducts and Portable Units and were designed especially to give unfailing magnetic protection to grain handling machinery.



PULLEY TYPE

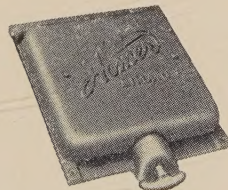
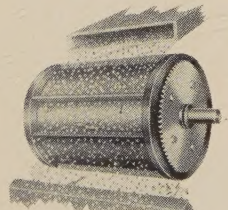


PLATE TYPE

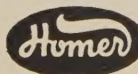


DRUM TYPE

Homer Magnetic Pulleys are GUARANTEED to give complete magnetic protection when ordered and installed for specific uses. Homer Magnetic Pulleys are available in standard diameters of 12", 15", 18", 20", 24" and 30", with belt widths ranging from 4" to 60". Ruggedly constructed, Homer Pulleys can be used at head end or as idlers in belt conveyor systems.

Homer Plate Type Magnetic Separators are furnished in standard widths from 4" to 26", with single or triple air gaps as required. Two types are available: Hinged plate types for easy cleaning in restricted areas, or Hingeless plate types for open or easy to get at locations. Many special fabrications are available based on your own specifications.

Homer Magnetic Drum Type Separators are furnished for the removal of tramp iron from fine or pulverized products, (grain, feed, food, etc.). Homer Drum Type Separators can be incorporated into chutes, hoppers, screw or belt conveying machinery and are furnished in standard diameters of 12" to 30", with face widths from 4" to 60".



The HOMER MANUFACTURING CO., Inc.

Dept. 106

LIMA, OHIO

Producers of Magnetic Separator Equipment, Since 1923

had never showed its head in this land. True, common disaster fell on us at times, such as the Chicago fire, the San Francisco earthquake, the devastation in the Mississippi Valley, the Galveston flood, and many others, but the stout heart, the generous heart of the common man then real and unspoiled came to the rescue. There was no need to appeal to the Government. Honest Christian courageous hearted people acted.

Loyalty To Principle

What has happened in these two decades? Where is the strong character of the people of Lincoln's time? Do we need new standards? What a wonderful thing it would be to hear from our leaders such as this: "I will stand by any man who is right and stand by him as long as he is right, and I will leave any man when he is wrong".

This attitude is about the highest expression of loyalty, but it is loyalty not to an individual but to a duty and a principle. Americans all could well study and take heart in the character of Washington and Lincoln, for certainly in that future day when reason shall again return to the American people we will once more march forward in our work and the achievements of the past will be surpassed by a free, fearless and courageous people.

NEW SOGES MEMBERS

We welcome the following as recent new members of the Society of Grain Elevator Superintendents:

(898) Clayton E. Witham, Simond-Shields-Theis Grain Co., Kansas City, Kans. (replaced Harry Madison).

(899) Thomas J. Coffman, Underwriters Grain Assn., Chicago.

(900) Arthur R. Stearns, Eastern States Farmers' Exchange, Inc., Buffalo, N. Y.

(901) O. E. Christiansen, Albers Milling Co., Seattle, Wash.

(902) J. F. Crumley, Quaker Rubber Corp., Orchard Park, N. Y.

(903) E. A. Olson, Quaker Rubber Corp., Minneapolis, Minn.

(904) Melvin L. Phillips, Farm Bureau Milling Co., Hammond, Ind.

(905) Fred H. Adams, Imperial Belting Co., Chicago (replaced Gordon Brown).

(906) Niles G. Babcock, Archer-Daniels-Midland Co., Tacoma, Wash.

(907) Perry S. Wrinkle, Boyd Conlee Co., Spokane, Wash.

(908) William R. Carter, The Essmueller Co., Kansas City, Mo.

(909) James W. Cottrell, Continental Baking Co., W. W. Div'n, Kansas City, Kans.

(910) Glen W. Fenton, C & G Grain Co., Topeka, Kans.

(911) Ralph W. Simning, Twin-City Sandblast, Minneapolis, Minn.

(912) Gerry W. Zolman, B. F. Goodrich Co., Chicago (replaced John Gullledge).

(913) E. J. Gass, Gate City Steel Works, Inc., Omaha, Nebr.

(914) Vincent S. Coughlin, Connecting Terminal Grain Elevator, Buffalo, N. Y.

(915) Kermit B. Renslow, Lustra Corp. of America, Minneapolis, Minn.

(916) Duane E. Edwards, Huss & Schlieper, Decatur, Ill.

(917) George D. Watson, Crown Mills, Portland, Ore.

(918) Frank A. Peterson, Drake Puget Sound, Seattle, Wash.

(919) Louis Delivuk, Louis Delivuk & Co., Spokane, Wash.

(920) Vernon W. Erickson, General Mills, Inc., Spokane, Wash.

(921) Burton F. Hales, Interstate Malt Co., Waterloo, Wis.

(922) Nathan Cohen, Manhattan Flour & Feed Co., Buffalo, N. Y.

(923) Robert A. Seamon, Maritime Milling Co., Inc., Buffalo, N. Y.

(924) Art Leard, A Leard Industrial Supply, Hamburg, N. Y.

(925) Eugene Blanton, Eagle Roller Mill, Shelby, N. C. (Replaced Vinson W. Washburn).

(926) Rolla E. Burris, Uhlmann Grain Co., Gilman, Ill.

(927) Jay Clark, Plant Supt., Ralston-Purina Co., Bloomington, Ill.

**Make this your
biggest PROFIT-
year in Corn,
Wheat or other
cereal grains!**

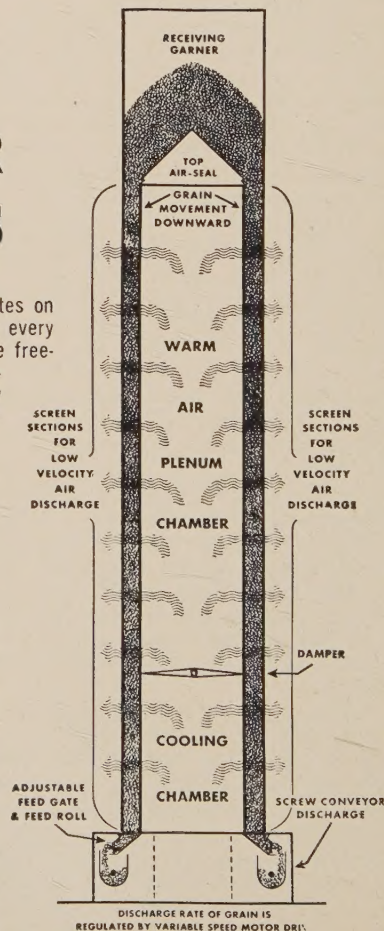
H. M. SHANZER CO.

85 BLUXOME STREET • SAN FRANCISCO 7, CALIFORNIA

Designers and Manufacturers of
GRAIN DRIERS • ELEVATORS
CONVEYING MACHINERY

BERICO COLUMNAR GRAIN DRIERS

The factory prefabricated drier that operates on the success-tested principle of processing every kernel in warm air as it passes down the free-flowing columns. Accurate moisture content and temperature control . . . low cost . . . high-bushel-per-hour capacity: BERICO features that mean PROFITS.



End View Cross Section

ON THE SAFETY FRONT

Conducted By
CLARENCE W. TURNING, SOGES Safety Director

ACCIDENT CAUSES AND REMEDIES

By C. W. Turning

TO HAVE efficient prevention we must understand the basic accident causes. Therefore, I have attached a list of hazards of the grain industry, and safety suggestions which have been offered for controlling these accidents. If you will help me by adding to the list we will have a much better grasp of our accident prevention problem. Let's have your comments.

We are advised that accident causes are found by thorough investigation of accidents and near accidents, as they occur. One reason why industry has less accidents due to machine failure than to human failure, is because we investigate the machine accidents. Perhaps if we would properly investigate all accidents, we would find ways and means to reduce the number of accidents caused by unsafe practices.

While we have the usual hazards of the average plant, we have more than our share of machine accidents; and machine accidents are much more severe than accidents occurring when handling material by hand.

As E. R. Cott said many years ago at a Safety Congress: "The problem of accident prevention on a dock or elevator property is similar to that of any other industry. Even with good stairs, steps, walks, runways, etc., with proper railings and guards, there is the ever recurring possibility of slips and falls. We have the boiler installations of the average plant, and of course, car tracks, over which engines and cars are moving. Laborers with hands and feet get in the way of these moving objects and massive machines. However, in a manner of speaking, every plant has these hazards, except we have the hazards from the water front. In the ordinary plant there is no danger of falling in and drowning."

State Problem First

The solution of any problem depends on the correct and complete statement of the problem before the solution is attempted. Therefore, if our problem is pretty much the same as that of the average industry, we can well adopt the successful safety plans which have been used in other industries, and as time goes on, better adapt them for our own particular operations.

It is the writer's opinion, that the accident investigation reports in our

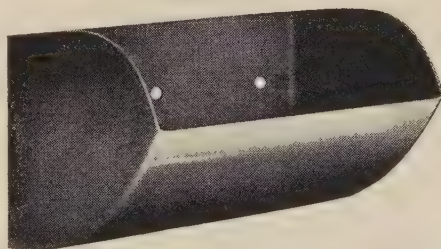
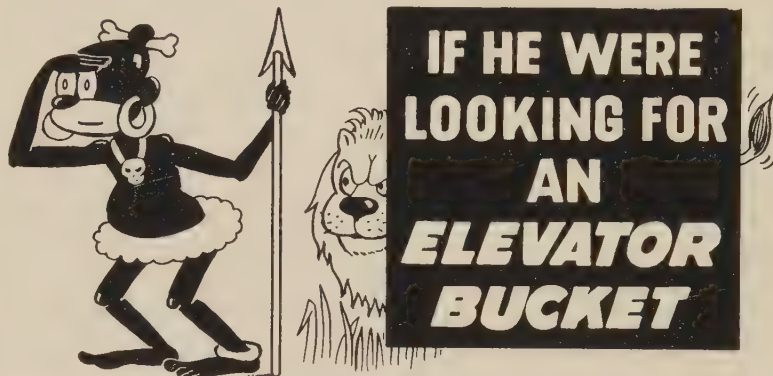
industry are below average, and that rarely do they have the complete story. As any report form is made to cover general conditions, and no accident meets the general conditions, better investigation is necessary; followed by a complete record of the facts. Prompt investigation is essential. In many cases the investigator

can, perhaps without much trouble, secure information immediately following an accident, which would not be possible to secure at a later date.

We feel that the matter of complete, prompt and impartial investigation of accidents is important, because unless we improve our reports of accidents and go deeper into the direct and indirect causes, our problem will be more or less obscure, and being partially unknown, cannot be solved.

Kinds of Accidents

As to the types of accidents experienced in our industry we have most every kind — and the propor-



Weller Pat.
No. 1,944,932

CALUMET SUPER CAPACITY CUP

They look to it for maximum capacity.

For complete discharge of full-capacity loads at outlet spout.

For elimination of wasteful backlegging.

For smooth, carefree operation over any size pulley at any permissible speed.

For longer wear and less wear and tear on belt.

IT'S THE Curve THAT Counts

The patented Logarithmic Curve design of the Calumet Cup has never been successfully imitated. Its performance has never been duplicated.

Ask Your Jobber

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Thirty-seven Years of Service to the Grain Trade



There's No Better Buy

Than Biwelco complete elevator legs, heads, boots and elevator legging . . . screw conveyor troughs, bins and sheet metal work to specifications. The Biwelco seal on any metal product is a guarantee of quality and satisfactory service. Estimates and advice of trained engineers upon request . . . not the slightest obligation on your part.

tion of each kind is about the same as for the average industry. As there is a mass of machinery, and few men working in the average plant; the proportion of machine accidents is high, and therefore our severity rate is higher than for the average industry. Our average frequency rate is also twice that of the average industry at least. The records of the few companies who have compiled accident statistics over a period of years would so indicate.

We seem to have more than our share of back strains, in our industry. Much can be done to eliminate strains by educating employees in the correct method of lifting heavy objects. It is essential in lifting or moving such objects, that they be held with a firm grasp, that sudden and violent jerks be avoided, and that the lifting be done with the leg muscles rather than the back and abdominal muscles. The back should be kept straight, the legs should be bent at

ENTER 1951 CONTEST

Remember now is the right time to enter the 1951 SOGES Safety Contest. Don't delay, for your plant may win one of the trophies. All that is needed now is the \$5 fee sent to the secretary.

the knees and the feet should be placed directly in a vertical line with the shoulders.

We also have a great number of injuries from falls. The number is greater than it should be, but it is natural that we have more than in the average industry, as so many of our men go into high places; and are probably in too much of a hurry in getting around.

Inspection: Proper inspection by an inspector, or an inspection committee, is the means of discovering hazards

before they cause an accident, and the hazards are immediately corrected, the plant is always kept in a safe condition. In many of our plants, the inspection committee are doing very good work.

Guards: Many of the Superintendents seem to feel that their plants are so well guarded that no new guards are required, and that guarding from now on is almost entirely a maintenance problem. We are not inclined to agree with this as we have too many machine accidents and feel that some of them would be prevented by more attention to machine guards. (To be continued)

SOGES CHAPTERS AND DATES

1st TUESDAY—Minnesota SOGES Chapter. Robert (Bob) Ranney, Ralston Purina Co., Minneapolis, President; Ray Bakke, Pillsbury Mills, Minneapolis, Vice-President; James Auld, Hales & Hunter Co., St. Louis Park, Secretary.

2nd TUESDAY — Omaha-Council Bluffs SOGES Chapter. Vincent Blum, Omaha Elevator Co., President; W. S. Pool, Nebraska-Iowa Elevator, Omaha, Vice-President; Frank Guinane, Interstate Grain Corporation, Council Bluffs, Secretary.

2nd FRIDAY — Central States SOGES Chapter. M. M. Darling, The Glidden Co., Indianapolis, President.

3rd TUESDAY — Kansas City SOGES Chapter. Andy J. Olson, Cargill, Inc., Kansas City, Mo., President; Robert T. Congrove, Standard Milling Co., Kansas City, Mo., First Vice-Pres.; L. C. Smith, Machinery & Supply Co., Kansas City, Mo., Second Vice-Pres.; R. K. Krebs, Norris Grain Co., Kansas City, Mo., Secretary-Treasurer.

3rd TUESDAY and 1st MONDAY, alternately — Chicago SOGES Chapter. Harry Hanson, Glidden Co., Chicago, President; Dale E. Wilson, Northwestern Malt & Grain Co., Chicago, Vice-President; Russell Paarlberg, Farm Bureau Milling Co., Hammond, Ind., Secretary.

3rd THURSDAY—Buffalo SOGES Chapter. Cornelius Halsted, General Mills, Inc., Buffalo, President; James Burns, Pillsbury Mills, Inc., Buffalo, Secretary.

QUARTERLY—Pacific Northwest Chapter. Lee McGlasson, Fisher Flouring Mills, Seattle, Wash., President; George Watson, Crown Mills, Portland, Ore., First Vice-President; Verne Erickson, General Mills, Inc., Spokane, Wash., Second Vice-President; O. E. Christensen, Albers Milling Co., Seattle, Secretary.

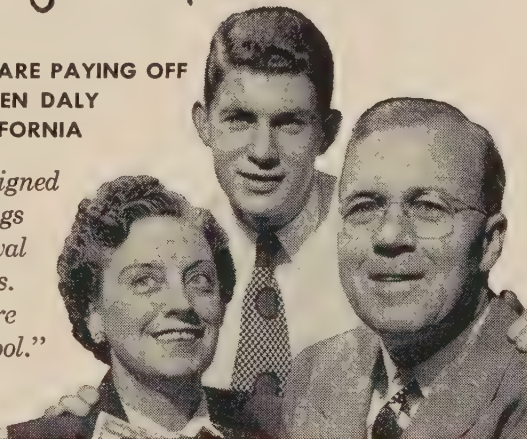
UTOPIA

Wouldn't it be great if we had:
1950 wages
1926 dividends
1932 prices
1910 taxes

"The bonds we bought for our country's defense are helping our boy become a doctor!"

HOW U. S. SAVINGS BONDS ARE PAYING OFF FOR JOHN AND HELEN DALY OF STOCKTON, CALIFORNIA

"Jimmy was 13 when I signed up for the Payroll Savings Plan at the Stockton Naval Supply Annex," says Mrs. Daly. "Today, bonds are sending him to medical school."



"We've saved \$3,550. Since John has his phonograph business I can put over 25% of my salary into Payroll Savings. It's a wonderful plan!"



"A \$100 bond is put aside each month toward Jim's education. He's at the University of Santa Clara now and bonds will see him through."

The Dalys' story can be your story, too!

Here's how you can turn your plans into reality, just as the Dalys did. Today—start a safe, sure saving program by signing up for U. S. Savings Bonds through the Payroll Savings Plan where

you work or the Bond-A-Month Plan where you bank. Even very small sums, saved systematically through these plans, will provide the cash reserve you need to make your dreams come true!

FOR YOUR SECURITY, AND YOUR COUNTRY'S TOO, SAVE NOW—THROUGH REGULAR PURCHASE OF U. S. SAVINGS BONDS!

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HALF CENTURY FOR STEPHENS-ADAMSON

This year marks the Stephens-Adamson Manufacturing Company's 50th year in the production of materials handling equipment at its Aurora, Ill. plant. The company began operations in a single 80 x 120 ft. building in June of 1901, and today occupies a 13-acre site with 230,000 sq. ft. of plant space. Branch plants are located at Los Angeles, Calif., and Belleville, Ont., with sales offices in principal cities in the United States and throughout the world.

BUHLER WILL MOVE TO NEW JERSEY

On February 1, Buhler Brothers, Inc., removed to a new and larger plant at 2121 State Highway 4, Fort Lee, N. J.

The move, it is reported, was necessary to accommodate the increased sales expansion of Buhler industrial manufactures. These include pneumatic conveyors for granular materials, chain conveyors, automatic conveyor-weighers, macaroni manufacturing machinery, flour milling equipment, brewing equipment, equipment for preparing all types of oil seed for pressing or extraction, etc.

The firm has been in existence in Europe since 1860, with headquarters and factories in Switzerland, and with New York headquarters for the United States and Canada since 1935.

BULLETIN ON HAND PALLET TRUCKS

New literature is now being issued about Lyon-Raymond Heavy Duty Hand Pallet Trucks in capacities of 4000 lbs. and 6000 lbs. The features of these products are well described and illustrated. Actual "on the job" applications show just how the truck is used in confined areas and in conjunction with power operated models.

Complete specifications are listed for both models. Write to Lyon-Raymond Corporation, 15378 Madison Street, Green, N. Y. and ask for your copy of Bulletin 222.

SHANZER SALES MEETING

H. M. Shanzer Co., manufacturer of Berico and Economy grain driers, held its annual Sales Meeting in its new offices in San Francisco during the first week in December. Those traveling from the Southern and Mid-western states to attend this meeting were L. Joy Allen of Jackson, Mich., Bill Keisel of Jennings, La., Dick Rankin of Lincoln, Neb., and Emery Metzger of Lake Charles, La. Also in attendance were Roy M. Plotz of Alameda, Calif., and Earle G. Harding of Longmont Colo., who was recently appointed to the Shanzer sales staff.

According to J. E. Metzger, Sales Manager, panel discussions were held treating problems related to advertising and sales promotion, mechanical and electrical apparatus and field service to the customer. A vigorous program has been adopted for the pursuit of the drier business in 1951 on a considerably expanded basis.

EHRSAM ANNOUNCES NEW UNION CONTRACT

Labor peace was guaranteed for 5 years, when The J. B. Ehsam & Sons Mfg. Co., Enterprise, Kans., recently completed a new contract with the International Molders and Foundry

Workers Union. The contract is similar to the agreement now in effect between General Motors and UAW, being tied to the cost of living. It is binding for the specified period and negotiations may not be reopened in that time unless both union and management agree to it.

The company's 223 hourly paid production workers were given an immediate wage boost. The increase is retroactive to Dec. 4. Though not in the union, the firm's 54 salaried office and professional workers also had their pay raised.

The new wage rate and the Bureau of Labor Statistics cost of living index for Jan. 15, 1951 will be the

Removes "DUST DANGER" by the CARLOAD!



Wiedenmann Dust Control installation for traveling tripper and floor sweeps at the Alton No. 2 Grain Elevator, East Bottoms, Kansas City, Mo.

This is part of a "job-engineered" Wiedenmann Dust Control System which collects 3,000 cu. ft. (1 carload) of dust every three weeks. The result is healthful, DUST-FREE air, where employees work *more efficiently* . . . explosion and fire risk is *minimized* . . . insurance premiums are *lowered* . . . dust accidents are fewer. You can't afford lurking dust hazards which constantly threaten your investment and sales . . . which cost you valuable dollars and wasted man hours. No matter how tough your dust problem is, Wiedenmann can build a dust control system to whip it . . . and make your plant a healthier, safer place to work. Act NOW . . . write Wiedenmann today for free survey, without obligation.

Write Us Today for a FREE SURVEY!



W. C. Wiedenmann & Son, Inc., Desk G-10
1820-24 Harrison Street
Kansas City, Missouri

Send my FREE COPY of Wiedenmann's brochure on Dust Control Systems at once!

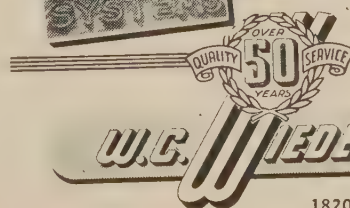
☐ Check if you are considering requesting our Free Survey.

Firm Name _____

Mailing Address _____

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Name and Position _____



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DON'T LET X

Mark the Spot

FOR EFFECTIVE DUST AND GAS PROTECTION

ROBERTSON Explosion Ventilators

WILL

Remove the more explosive fine dust from the leg by continuous gravity action

WILL

Release pent-up gases and flames in case of an explosion

WILL

Minimize the possibility of a secondary explosion by continuously venting gases

ROBERTSON Ventilation Engineers

WILL

Inspect your elevator and recommend proper sizes and number of ventilators to secure maximum protection at minimum expense.

Write Now for Details

H. H. ROBERTSON CO.

Farmers Bank Building
Pittsburgh, Pa.



This 600,000-bu. Quonset grain drying and storage plant was recently opened at Glen Rock, Va., by the Tidewater Regional Market, Inc. There are six Quonset buildings made by the Stran-Steel Div., Great Lakes Steel Corporation, Detroit, Mich. Four of these buildings are used for grain storage, one for ear-corn drying and one for wet storage of shelled corn. When shelled corn or soybeans move into the large storage buildings, special provision has been made to aerate grain by turning as needed. The turning is accomplished with a redistribution system. It is expected that a continual process of fumigation will be necessary because of the heavy infestation of weevils in the area. Most corn is infested with weevils before it is harvested and comes to the storage depot infested. It is possible that all grain will have to be fumigated as it enters the wet storage or some other predetermined point.

dual standard for the wage rate system. Wages will be adjusted quarterly, in proportion to increase in living costs.

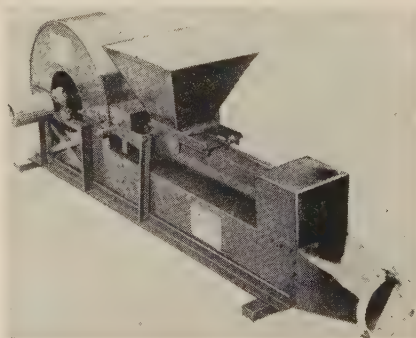
In addition to the "cost of living" increase, Ehrsam workers can look forward to a steady "improvement factor" increase each year in the first pay period after Dec. 1.

The company, according to Pres. D. M. Ehrsam, opened wage negotiations 6 months before it was necessary to do so under the current contract with the I. M. & F. W. U. The step was taken, he added, because the cost of living had been rising steadily since the last contract was negotiated in May, 1950.

GRAIN BLOWER CLEANER AND DRIER

A unit that dries, cleans and moves grain — the Air Force Grain Blower — is now available through Seedburo Equipment Company, Chicago, according to R. D. Harfst, vice-president.

The Air Force Blower and Conditioner carries all types of small grain, seeds, malt, rice, peas, beans, flax, corn, etc., as far as 250 ft. or more, instantaneously. It will handle 300 to



Air Force Grain Blower

1000 bus. per hour through a spout into grain bins or cars. Yet, it will not break, bruise, crack or injure any grain, corn or seed.

All grains are introduced ahead of the fan into air pressure by a positive feeding device. This provides the necessary air pressure to move the grain in the desired direction, around corners, at any angle or on any level.

The Air Force Blower is only 30 in. in height and 8 ft. in length.

SIGNODE REDESIGNS TRADE-MARK

Shown here is the new trade-mark recently adopted by Signode Steel Strapping Company, Chicago. It re-



tains the girdled globe motif familiar to Signode customers for the past 30 years.

Signode agencies are active in Argentina, Australia, Brazil, Canada, Cuba, England, Iceland, India, Mexico, Peru, Puerto Rico, Sweden, Switzerland and Uruguay. These agencies service industries and shipping interests in many other countries. Signode services its customers throughout the United States from branch offices in 45 cities. In addition, special service is maintained for defense and other departments of the U. S. Government.

Men show their character in nothing more clearly than by what they think laughable.—Goethe.

Atom Bomb Effects

FRANK M. DUTRA, M.D.

Associate Professor of Industrial and Forensic Pathology
University of Cincinnati

AT THE moment of the blinding flash of light, there are also spread over the city large amounts of damaging, invisible, ionizing radiation. This radiation is like x-ray but has higher energy and is therefore more likely to be injurious. These rays are penetrating, and are not reflected from surfaces as are the heat and light rays, but will extend through walls and injure the occupants of buildings. Thick concrete walls or underground shelters protect from these rays. The radiation is not effective at such great distances as are the heat rays, so that persons some distance from the burst of the bomb who are burned by the flash of light may not receive damaging amounts of radiation.

Blast Wave and Wind Wave

A terrific momentary blast wave occurs in the region up to a mile from ground zero (ground zero is the point directly below the exploding bomb) immediately after the

flash, followed from one to a few seconds later by a wave of wind traveling several hundred miles per hour. The blast wave crushes lightly constructed buildings which it strikes, while the wave of wind that follows is of sufficient intensity to cave in the sides of more resistant buildings or to shift whole buildings on their foundations. This wind may last for several seconds and may do light damage as far as eight miles from ground zero.

Ten seconds after the moment of the flash, the immediate effects are over and the secondary destruction from fires begins. Some of these fires may have been kindled by the heat flash; the majority are probably the result of ignition within destroyed buildings. As the fires sweep through the damaged city with increasing intensity, air may rush in from the surrounding areas and the winds reach gale proportions. These winds whip the flames and spread the fire.

Most of the burns will be among persons within a mile and a half of

ground zero and will result from the heat rays given off by the bursting bomb and the ball of fire. Since heat rays penetrate buildings and clothing poorly, persons who are even lightly protected are not likely to sustain such burns.

Flash burns of the type under discussion were found in persons at a distance of one and one-half miles from ground zero at Hiroshima, and as far as two and one-half miles at Nagasaki. Wooden posts and clothing were charred at distances up to two miles from ground zero, and close beneath the exploding bomb granite surfaces were blistered.

A peculiarity of flash burns is that only the surfaces exposed to the heat rays are damaged. The burns among survivors were nearly all on surfaces exposed to the flash from the bursting bomb and the ball of fire. While clothing serves to protect from burns, it is important to remember that tight-fitting clothing affords less protection than relatively loose garments;



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also, the greater the thickness, the less likelihood of penetration by the heat. White clothing reflects appreciable quantities of the heat, and many persons who were wearing clothing with patterns in the fabric were burned beneath the dark areas, which tended to absorb heat, while the areas beneath the white portion of the clothing were spared.

Effects of Blast Waves

Many persons were injured as a result of the blast waves. Those near ground zero might have been damaged by the direct effects of the waves, but most such persons were doubtless already dead or dying from the intense heat in the central zone. Almost without exception, those persons who survived the bombs and who received mechanical injuries were injured either by collapse of buildings or by flying glass or debris.

Windows were shattered up to eight miles from ground zero, and persons near the shattering windows were pelted with small fragments that penetrated deeply into their flesh. In some cases, larger fragments of flying glass killed the victims or amputated extremities.

Many persons were injured in collapsing buildings, but because rescue operations were poor few of these casualties were evacuated in time to save them from the fires that soon completed the destruction around the central zone. Fractures were uncommon among survivors, probably because most of the persons who sustained fractures subsequently were burned to death. If rescue teams had been prepared to liberate the injured from damaged buildings, the number of deaths could have been less.

Radiation Effects

Nearly all persons in the central zone, where heavy dosage occurs, sustained severe burns and traumatic injuries in addition to the radiation injuries. Those few who escaped death from burns and injuries suffered from nausea and vomiting within a few hours after the exposure, and this persisted for a day or so. Then there were two or three days of comparative well-being, after which vomiting started again, accompanied by bloody diarrhea. Then fever began and the patients became emaciated, and ulcers appeared in the mouth.

Death occurred in this group around the tenth day.

Moderately severe cases were either in the central zone and fairly well shielded, or were unshielded in the intermediate area from approximately $\frac{3}{4}$ mile to 1 mile from ground zero.

They also suffered nausea and vomiting in one to two hours; then from the second to about the tenth day there were no symptoms. On about the eleventh day, their hair began to drop out, and this progressed until death or until the hair was completely gone about the twentieth day. Also on the eleventh day, hemorrhagic spots began to appear on the skin and the temperature began to rise. Progressively, there were loss of appetite, ulcerations in the mouth, bloody diarrhea, and emaciation.

About fifty per cent of these persons died at about the thirtieth day. The deaths of these are due to loss of body fluids, hemorrhages, or secondary infections. Some will die because they have sustained burns or injuries which do not heal because the protective mechanisms of the body have been destroyed by the radiation.

Some of the people who live longer than thirty days will die months later from abscesses of internal organs that become established during the period that their body defenses are not functioning.

Mild cases were shielded in the central or intermediate zones or were in an outer zone from 1 to $1\frac{1}{2}$ miles from ground zero.

The burst of an atom bomb on the

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APRIL 18 - APRIL 21, 1951

Hotel Statler---Buffalo, N. Y.

Write Richard J. Hewitt, Hotel Statler, Buffalo 2, N. Y.



This is one of CCC's "concentration camps" for grain. It is located at Winterset, Iowa. The unfinished portions have been completed since this picture was taken. Total storage capacity is 739,000 bus. This is divided into 80 cylindrical steel bins holding 3,380 bus. each, 15 wooden bins of 4000 bus. each and six quonset-type buildings of 10,000 bus. capacity each.

street of a city would produce a large crater, perhaps several hundred feet in diameter, surrounded by a zone of complete destruction. The region of complete destruction would probably not be as great as from a blast several hundred yards above the city because energy would be dissipated in producing the crater.—*From address before Ohio Grain, Mill and Feed Dealers Assn. at Cincinnati.*

CHICAGO CHAPTER ACTIVITIES

The dinner and regular Chicago SOGES Chapter meeting was held at Phil Smidt's Restaurant, Hammond, Ind. on Jan. 15 and was attended by 57 members.

Russ Maas and Ed Escher of Screw Conveyor Corporation showed an interesting film, "Yours To Command" produced by the Conveyor Equipment Mfrs. Assn.

There was a short discussion on date of Ladies' Night, and Rudy Skala explained it would be impossible to obtain the Swedish Club for March 10, and final date decided on by the members was May 5.

A committee was appointed for Ladies' Night consisting of Rudy Skala, Chairman; Harry Hanson, Sub-chairman; Dale Wilson, Lloyd Forsell, Gerry Zolman, Joel Dickinson, Rex Hocum and Andy Anderson.

Russell Paarlberg, Secretary of the Chicago Chapter, was unanimously elected Treasurer as well.

The Associates Party Committee voted to turn surplus cash from Dec. 9 Associates' Party, over to the Secretary-Treasurer, money to be used for 1951 party only.

The next meeting will be held on Monday, Feb. 5, with Ben Linderman and Irwin Cohen hosts to the Chapter at the Arco Bag Company's plant.

RAILROAD MOTIVE POWER INCREASES

Class I railroads installed in service more new locomotives in the first 11 months of 1950 than in any corresponding period in the past 27 years and now have more new locomotives on order than at any other time in that period, the Association of American Railroads announced on Dec. 20.

New locomotives put in service in the first 11 months of 1950 totaled 2,132, of which 2,111 were diesel, 11 steam and 10 electric. In the same period last year, they installed 1,742 of which 1,687 were diesel and 55 steam. Two hundred new locomotives, including 196 diesel, 2 steam and 2 electric, were put in service in November this year.

Class I railroads on December 1 had 1,657 new locomotives on order, of which 1,634 were diesel, 17 steam

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and 6 electric. On December 1 last year, there were 969 on order, which included 950 diesel, 15 steam and 4 electric. In the first 11 months of 1950, Class I railroads placed orders for 2,891 new locomotives, also the greatest number for any corresponding period since 1923. These included 334 new locomotives ordered in November this year.

The increase in the motive power supply of Class I railroads in 1950 compared with 27 years ago is much more than indicated by the number of locomotives put in service, for the reason that the pulling power of the


average new locomotive is 50% greater than it was in 1923.

MOLD PROCESS CUTS COST OF MAKING ALCOHOL FROM GRAIN

Industrial alcohol can be produced from grain by a new mold process at less cost than by the traditional malt process, the U. S. Dept. of Agriculture reports. A plant using 12,000 bus. of grain a day could save, it is said, more than \$1,000 in each day's operations by shifting to the new process, which uses a mold product called

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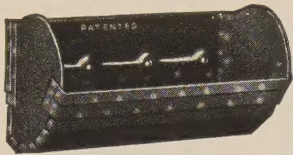
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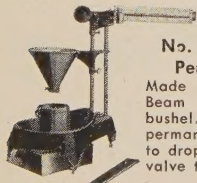
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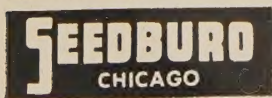


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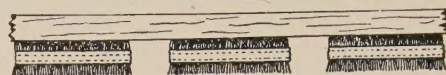
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fungal amylase in place of malt, the Department says. This estimated saving was calculated on the basis of commercial-scale experiments at an Iowa distillery.

A full report of these tests is being issued by the Grain Branch of the Department's Production and Marketing Administration. The new fungal-amylase process was developed by the Bureau of Agricultural and Industrial Chemistry, which cooperated in the commercial trials. Bureau scientists first worked out means of using the mold enzyme to replace malt on a pilot-plant scale at the Northern Regional Research Laboratory in Peoria, Ill., and then aided PMA in supervising large-scale tests of the process, which were carried out at the Iowa plant under authority of the Research and Marketing Act of 1946.

on a wide systematic investigation of the applications of these by-products, is now according research attention to the chemical aspects, with particular emphasis on studies of the properties of the various extracted fractions.

BENSON ILL IN TEXAS

Arthur C. Benson, operating superintendent of the Blimp Hangar at Hitchcock, Texas for the National Warehouse Co., Fort Worth and a SOGES Past President suffered a heart attack during the first week in December. He was taken to St. Marys Infirmary in Galveston and latest reports are that he is slowly recovering.

BURRIS WITH UHLMANN

R. E. (Gene) Burris has accepted the position of Elev. Supt., Uhlmann Grain Co., Gilman, Ill. — a 130,000-bu. house. Mr. Burris has been working in grain elevators for about 20 years. The past decade he has spent with Standard Milling Co., Kansas City and for the last 5 years he was general foreman. One of the first things he did when he came to his new job was to become a SOGES member.

**NEW ST. JOSEPH
SOYBEAN PLANT**

A contract has been awarded by the Dannen Grain & Milling Company for process equipment and engineering for a new 130-tons-per-day soybean processing plant to be located at St. Joseph, Mo.

Equipment will be furnished by

Plants and People

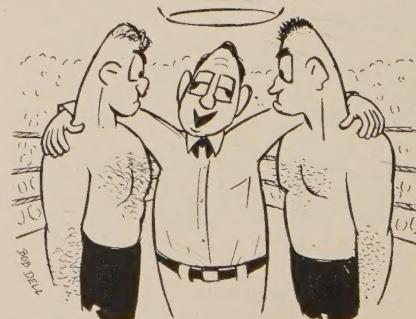
BEN MANY DIES

His many friends in the grain and grain processing industries were saddened to learn of the death of Ben J. Many on Jan. 27. Mr. Many was head of the B. J. Many Co., Inc., Chicago and for many years had been active in work of the SOGES. Illness kept him confined to bed for a long period and his passing was not unexpected. He was 68 years old. Funeral services were held in Oak Park, Ill.

FURFURAL FELLOWSHIP

Dr. Edward R. Weidlein, Director, Mellon Institute, Pittsburgh, Pa., announces that The Quaker Oats Company of Chicago, Ill., is the donor of a new fellowship there that relates broadly to research on the utilization of by-products from the manufacture of furfural. Charles E. Colwell (Ph.D., Purdue University, 1950), the incumbent of the fellowship, has the close collaboration of Quaker Oats specialists.

At present furfural by-products are being utilized in fertilizer, foundry and plastics technology, and are under evaluation in other diverse fields. The fellowship, in setting out



"Break clean. Come out fighting and face the television camera."
—Palette & Brush

Chemical Plants Division of Blau-Knox Co. It includes machinery for cracking, conditioning and flaking the soybeans, and solvent extraction processes for separating the oil and recovering the solvent. The extractor itself will be of the Rotocel type.

Engineering work includes design of footings and miscellaneous field work, erection of equipment, and installation of piping and wiring. The plant is scheduled for completion in time to accommodate the 1951 harvest.

WILBER UNDERGOES OPERATION

Harold Wilber, Elevator Supt., A. E. Staley Mfg. Co., Decatur, Ill., was operated upon in the Macon County Hospital in Decatur, Jan. 11. The operation was a delicate one involving some bone-grafting in connection with sacroiliac. However, it was reported to have been very successful and Harold is now convalescing although it will be several weeks before he can leave the hospital and several more before he can return to work. Letters and cards from fellow SOGES members have cheered him much and he wishes to express thanks in GRAIN to all who've written.

NEW RALSTON PURINA PLANT

Contracts have been awarded by Ralston Purina Co. for construction of a \$1 million feed mill at Delmar, Del. The plant is going to produce broiler feeds and will supplement the firm's other Delaware plant at Wilmington. Grain storage capacity will be 200,000 bus.

REPORT FROM CANADA

"We're having a comparatively mild winter here" writes J. Bruce Winfield, SOGES Director and Supt., Canadian Pacific Railway Elevator, Port McNicoll, Ont. "There is less business than usual due to reduced elevator stocks. I hope 1951 holds more for us in the line of business. We were down nearly 100% from last year."

COUNCIL BLUFFS ELEVATOR LEASED

The Rock Island Elevator, Council Bluffs, Iowa has been leased by the Interstate Grain Corporation to the Kansas Grain Co. a division of Flour Mills of America, Kansas City, Mo. The elevator has a capacity of 1,500,000 bus. and will raise the total storage capacity operated by the lessee to 13,750,000 bus.

ANOTHER STALEY PLANT

Plans for the construction at Painesville, Ohio of a modern soybean processing plant with a daily capacity of 10,000 bushels have been announced by officials of the A. E. Staley Manufacturing Co. Decatur, Ill.

The new plant will use the solvent extraction process, and will replace an older expeller plant which the company has operated at Painesville since 1939. It will have 25% more capacity than the existing facilities.

WATSON NOW DIRECTOR OF PMA GRAIN BRANCH

Appointment of Drexel D. Watson as Director of the Grain Branch, Production and Marketing Administration of USDA effective immediately, was announced on Dec. 1 by Ralph S. Trigg, PMA Administrator. Mr. Watson, who has been serving as Assistant Director of the PMA Commodity Office at Portland, Ore.,

succeeds Leroy K. Smith, who resigned as Director of the Grain Branch last September 1 to devote his full time to private farming and business operations.

BRAZEL RECOVERING

William F. Brazel, Superintendent, Santa Fe Elevator, Chicago this month underwent an emergency operation for appendicitis in the Loretto Hospital, Chicago. He is now convalescing and expects to be back on the job in a short time.

The merchants will manage commerce the better, the more they are left free to manage for themselves.—
Thomas Jefferson.

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